FAA-S-1142a
April. 10, 1964
SUPERSEDING
CAA Spec. CAA-R-1142
May 1, 1958

FEDERAL AVIATION AGENCY SPECIFICATION

VOICE FREQUENCY MULTI-TONE REMOTE CONTROL CIRCUITS

1. SCOPE

1.1 Scope.- This specification sets forth the characteristics of an audio frequency circuit to be used for the two-way transmission of voice communications and one-way or two-way transmission of audio control tones. This circuit is for use, in conjunction with Government-owned equipment, in the mobile aeronautical service.

2. APPLICABLE PUBLICATIONS

2.1 Ground rules. - Section 3 of the following document:

Aviation Facilities Service Manual of Operations,
AF-P-4441.4 (formerly I-E-2)
Practices Concerning Leased Telecommunication Services

(Requests for this applicable document should be addressed to Federal Aviation Agency, Washington, D. C. 20553, ATTN: IM-140.)

(Copies of this Specification, FAA-S-1142a, may be obtained from the Federal Aviation Agency, Washington, D. C. 20553, ATTN: Contracting Officer. Requests should fully identify material desired, i. e. , specification number,. date, amendment number; also requests should state the contract involved or other use to be made of the requested material.)

3. REQUIREMENTS

3.1 Impedance. - The characteristics of the circuit shall be designed to operate with balanced 600-ohm equipment.

3.2 Frequency response.

3.2.1 - The circuit net loss at 1000 cps shall be not more than 9 db +0 or -1 db.

3.2.2 - The circuit net loss for frequencies between 300 and 500 cps shall not vary from the 1000 cps loss by more than -1 db or +6 db.

3.2.3 - The circuit net loss for frequencies between 500 and 2500 cps shall not vary from the 1000 cps loss by more than -1 db to +3 db.

3.2.4 - The circuit net loss for frequencies between 2500 and 2800 cps shall not vary from the 1000 cps loss by more than -1 db to +5 db.

3.2.5 - The circuit net loss for frequencies between 2800 and 3000 cps shall not vary from the 1000 cps loss by more than -1 db to +8 db.

3.2.6 - A seasonal variation of +3 db to - 1 db is allowed in addition to the above net loss across the band.

3.2.7 - The enumerated net losses shall be effective between the points, of connection with FAA equipment at each end of the circuit.

3.3 Noise level.

3.3.1 - The signal-to-noise ratio shall be not les s than 36 db for the frequency range 300-2500 cps using a -8 dbm signal input level.

3.3.2 - The signal-to-noise ratio for the frequency range 2600-3000 cps shall be at least 15. 5 db using a-15 dbm signal input level.

3.4 Direction of transmission.- The Government will specify, when placing the order, if one-way or two-way transmission of audio control tones will be required.

3.4.1 - All requirements of this specification shall apply to transmission from the control point to the remote site if a one-way tone circuit is requested.

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